

[Multidirectional Linear Force Converter]

Abstract

This is a device that controls centrifugal force to produce variable linear force in a direction that may be altered at any time by the operator. All moveable parts ride on bearings, and the negative forces that are created by rotating the weighted arms inward are counteracted by other weighted arms rotating outward, or positive forces, so that the device can operate on a relatively small power supply. The device is comprised of a fixed single Main shaft which is attached to the frame. Said shaft has two collars held in place by bearings, thus are independent of said shaft. Each collar has a sprocket attached to it and is controlled by an outside means. One collar is a drive collar that will rotate continuously at a set speed. The second collar is a steering collar which will remain in a fixed position until the operator decides to adjust speed or course. The drive collar has at least 4 Primary arms that extend perpendicular from the Main shaft. Attached to the end of each Primary arm are two Secondary arms, which rotate in a parallel plane to that of the Primary arms, one being above it and one below it. There are then Weights attached to the ends of the Secondary arms to create

mass. The Steering collar controls the Secondary arms by using chain and sprockets that are on a 1:1 ratio. Therefore, every time the Primary arm completes one cycle around the Main shaft, the Secondary arms also complete one cycle around the end of the Primary arm. As long as the Steering collar remains in a stationary position the following will occur. If both the Primary arm and Secondary arms are facing an Easterly direction in a way that the weights, or mass, are fully extended Eastward then: When the Primary arm rotates 90 degrees to the North the Secondary will also rotate 90 degrees off the end of the Primary shaft. Therefore though the Primary arm is now facing North the Secondary arm is still facing East due to the connecting 1:1 ratio of the stationary Steering collar. As the Primary arm continues rotating another 90 degrees and faces West, the Secondary arm continues rotating 90 degrees and still faces East. The weights, or mass, are now located much closer to the Main shaft than when the Primary arm was facing East. Therefore, you are in essence, controlling the radius of a rotating object, lengthening it in one direction while shortening it in the other. Since centrifugal force is directly relational to it's radius, you will create more force in one direction than you will in the other., therefore creating linear force.